

USB Power Delivery Protection



Simply cancel ESD and EOS transient events



ESDAxxP protection devices are a space-saving for protecting USB charging circuits to improve device robustness and extend their lifetime.

Designed to protect USB charging circuits to improve the robustness and lifetime of your devices, ESDAxxP protection are available in a complete voltage range from 5 to 22V to support the most popular charging standards. With surge current capability up to 160A and a wide package offering, our ESDAxxP series includes protection devices optimized to support specific applications.

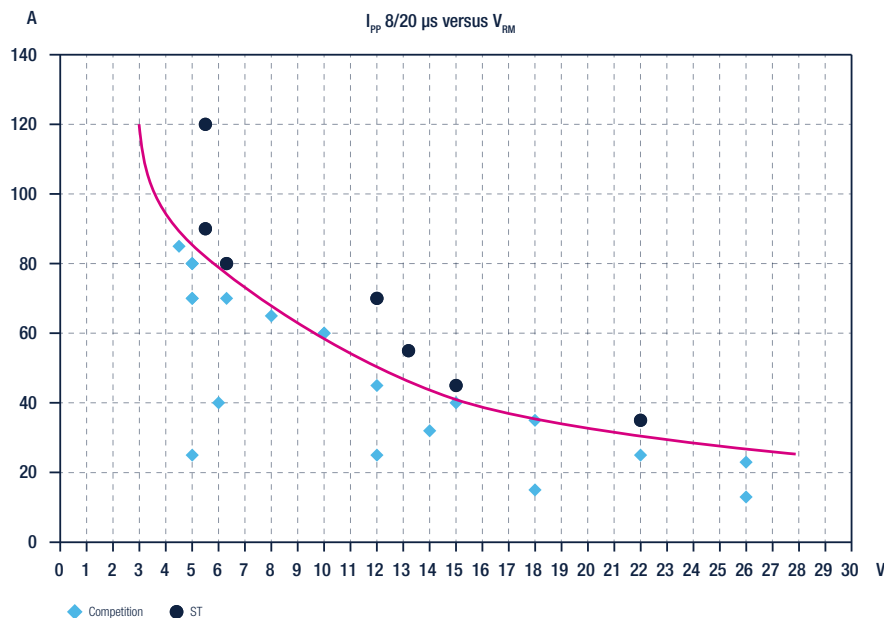
KEY FEATURES & BENEFITS

- Complete voltage range: 5 to 22V
- High 8/20 μ s surge protection capability from 25 to 160A peak pulse current
- 4 small, thin packages:
 - ST1610x (1.6x1.0mm)
 - QFN (2.0 x 1.8mm)
 - QFN (2.0 x 20mm)
 - SOD882T (1.0 x 0.6mm)
- High-power, miniature protection
- Saves PCB real-estate
- Highest peak pulse current in the market

KEY APPLICATIONS

- Any device with USB Power Delivery charging technology and all equipments having a USB type C interface
- Power banks
- Smartphones and tablets
- IoT devices
- Wearables
- Drones

Peak pulse current performance



Get started with our online TVS smart selector to find the best solution for your design.



3 reasons to adopt the ESADxxP

Robustness

The ESDAxxP series can absorb up to 160A peak pulse current while always keeping the clamping voltage versus operational voltage ratio below 2. For instance, your 5 V USB circuit will never face more than a 10 V overvoltage during transient events (IEC61000-4-2 ESD and IEC61000-4-5 surges).

Discretion

The ESDAxxP series saves space on PCBs so that you can integrate more functions or further miniaturize your device. Housed in a large choice of small packages with a maximum thickness of 0.35mm, these devices are ideal for your flat devices.

Simplicity

Change the USB charging voltage without changing your PCB! We offer protection devices for 5 V, 9 V, 12 V and 20 V charging voltages in small packages.

Product table

USB VBUS AND VBAT ESD & EOS PROTECTION							
Part number	Number of lines	Directionality	Voltage	Peak pulse current (I_{pp} @ 8/20μs)	V_{CL} @ I_{PP} (@8/20μs surge)	IEC 61000-4-2 min (contact for 8 Kv in V)	Package & size (mm x mm)
ESDA7P60-1U1M	1	Uni-Directional	5.5	60	10	30	ST1610 1.6x1.0
ESDA7P120-1U1M	1	Uni-Directional	5.5	120	11	30	ST1610 1.6x1.0
ESDA7P80-1U1M	1	Uni-Directional	5	80	8	30	ST1610 1.6x1.0
ESDA13P70-1U1M	1	Uni-Directional	12	70	20	30	ST1610 1.6x1.0
ESDA15P60-1U1M	1	Uni-Directional	13.2	60	20	30	ST1610 1.6x1.0
ESDA17P50-1U1M	1	Uni-Directional	15	50	24	30	ST1610 1.6x1.0
ESDA17P100-1U2M	1	Uni-Directional	15	160	28	30	QFN 2.0x1.8
ESDA22P150-1U3M	1	Uni-Directional	20	150	27	30	QFN 2.0x2.0
ESDA25P35-1U1M	1	Uni-Directional	22	35	39	30	ST1610 1.6x1.0
ESDA24P140-1U3M	1	Uni-Directional	22	140	33	30	QFN 2.0x2.0
USB CC AND SBU LINES ESD & EOS PROTECTION							
ESDA8P30-1T2	1	Uni-Directional	6.3	30	12	30	SOD882T 1.0x0.6
ESDA8P80-1U1M	1	Uni-Directional	6.3	80	13.2	30	ST1610 1.6x1.0
ESDA9P25-1T2	1	Uni-Directional	7.9	24	13.7	30	SOD882T 1.0x0.6
ESDA17P20-F2	1	Uni-Directional	15	25	20.6	30	SOD882 1.0x0.6



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